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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/138,339 | 08/21/1998 | TIMOTHY R. PRYOR | IV/L/P5591 | 3965 |

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| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2675

DATE MAILED: 04/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------|--------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/138,339 | PRYOR |
| | Examiner | Art Unit |
| | Alecia D. Nelson | 2675 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 12 February 2003.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 65-81 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 65-81 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

| | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6) <input type="checkbox"/> Other: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | |

DETAILED ACTION

Claim Objections

1. **Claim 74** is objected to because of the following informalities: There appears to be a typographical error in the wording of the claim, which makes it hard to understand what is actually being claimed. The examiner request that the applicant correct the error or clarify by re-wording the claim. The claim will be rejected as best understood by the examiner. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. **Claims 65, 80, and 81** are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The newly cited limitation, "said at least two TV cameras being pointed in substantially a same direction away from the display", as recited in **claim 65**, and "said at least two TV cameras being pointed in substantially a same direction", as recited in **claims 80 and 81**, there is no description explaining how the direction or placement of the TV cameras are placed on the display.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. ***Claims 65-71 and 73-81*** are rejected under 35 U.S.C. 102(e) as being anticipated by Mack et al. (U.S. Patent No. 6,198,485).

With reference to ***claims 65, 80, and 81*** Mack et al. teaches a method for input by a person of data to a computer having a display comprising the step of providing at least two spaced TV cameras (220, 230) provided on a display (column 4, lines 30-32), the at least two TV cameras being pointed in substantially a same direction away from the display (see Fig 3) for acquiring at least a stereo pair of images of one or more datums (240) associated with the person (160), photogrammetrically, determining, from the stereo pair of images acquired by the TV cameras, the three dimensional position of at least one of the datums (240), and controlling the display (120) on based on said position of the datum(s) (see column 2, lines 19-26). With further reference to ***claims 80 and 81***, it is further taught that the datums are associated with the person and can be a natural feature of the person (see column 2, lines 19-26).

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With reference to **claim 66**, Mack et al. teaches that the cameras are located on opposite sides of the display (see Fig. 3).

With reference to **claims 67, 68, and 79**, Mack et al. teaches that at least one datum is a natural feature of the person or on clothing worn by the person, or an artificial feature on the person or on clothing worn by the person (see column 2, lines 19-26).

With reference to **claims 69, 70, and 75** Mack et al. teaches the usage of a light source (210), which illuminates the marker to be imaged by the stereo cameras (see column 2, line 67-column 3, line 3)

With reference to **claims 71 and 74**, Mack et al. teaches that the display provides 3D graphical data concerning a virtual object, which is manipulated by the person (see column 2, line 19-26).

With reference to **claim 73**, Mack et al. teaches that the orientation of a portion of the person is also determined (see column 4, lines 45-63).

With reference to **claim 76**, Mack et al. teaches that the light source is any light source that provides sufficient light for the camera (see column 3, lines 30-36).

With reference to **claims 77 and 78**, Mack et al. teaches that the datums is distinctive in color and shape (see columns 4, lines 1-8)

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Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claim 72** is rejected under 35 U.S.C. 103(a) as being unpatentable over Mack et al.

With reference to **claim 72**, Mack et al. fails to specifically teach that there are datums on additional persons, which are sensed by the cameras, and wherein information concerning the positions thereof are determined. However, Mack et al. does teach that the embodiments of Figs. 2 and 3 are combinable to form one system, wherein the system can detect movement of the datums as well as movements of natural features of the users.

Oh teaches a second embodiment wherein there are provided two game compartments (2A, 2B) capable of detection positions of the markers (M) on the players (Q1, Q2) to control the motion of game characters (C1, C2) on display screens (41A, 41B) (see column 8, lines 24-54).

Therefore it would be obvious to allow a system that can detect datums on a plurality of users, as taught by Oh, in a system similar to that which is taught by Mack et al. in order to provide a motion controlled video entertainment system that allows interaction between the players as opposed to a player and the computer, which thereby provides for a more realistic gaming system.

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Response to Arguments

8. Applicant's arguments with respect to **claims 65-81** have been considered but are moot in view of the new ground(s) of rejection. With regards to the applicant's arguments that detecting X, Y, Z coordinates is not the same as pitch, roll, and yaw orientation. However, it is rather inherent that if there is a detection of X, Y, Z coordinates for position control in a 3D environment that the pitch, roll and yaw orientation is determined therefrom.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alecia D. Nelson whose telephone number is (703)305-0143. The examiner can normally be reached on Monday-Friday 9:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Saras can be reached on (703)305-9720. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9314 for regular communications and (703)872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-9700.



STEVEN SARAS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

adn/ADN
April 17, 2003